

## Miami County

## Estimated Economic Impact of Agriculture, Food, and Food Processing Sectors 10/8/14

19 agriculture, food, and food processing sectors were analyzed to determine their overall contribution to the Miami County economy.<sup>1</sup>

These 19 sectors have a total direct output of approximately \$129 million and support 1,423.7 jobs in Miami County. Running the model for all 19 sectors simultaneously produces the following results:

Agriculture Contribution in Miami Co								
Impact Type <sup>2</sup>	Employment	%	Total Value	% of Gross	Output <sup>5</sup>	% of Gross		
		Employment	Added <sup>3</sup>	Regional		Regional		
				Product <sup>4</sup>		Product		
Direct Effect	1,423.7	13%	34,964,864.2	5%	128,766,322.3	18%		
Indirect								
Effect	69.2	1%	7,994,081.9	1%	12,253,607.3	2%		
Induced								
Effect	90.0	1%	7,021,498.4	1%	10,632,438.5	1%		
Total Effect	1,582.9	14%	49,980,444.5	7%	151,652,368.1	21%		

As shown in the above table, agriculture, food, and food processing supports 1,582.9 jobs, or 14% of the entire workforce in the county. These industries provide a total economic contribution of approximately \$152 million, roughly 21% of Gross Region Product (GRP). As noted below in the calculation of Gross Regional Product, imports and institutional sales are subtracted. Therefore, counties that import a relatively large amount of goods and services will have a reduced GRP which may lead to agricultural output being greater than GRP.

Another metric used to calculate the importance of sectors in an economy is their value added as a percentage of GRP. Total value added by the 19 agriculture, food, and food processing sectors is approximately \$50 million, or 7% of the GRP. This indicates that personal income, business income, and taxes generated by these sectors account for 7% of the total economy.

<sup>1</sup> Article on building a contribution analysis in IMPLAN that avoids double counting: <a href="http://www.implan.com/index.php?option=com">http://www.implan.com/index.php?option=com</a> content&view=article&id=660%3A660&catid=253%3AKB33&Itemid=70

<sup>2</sup> Direct, indirect, and induced effects sum together to estimate the total economic contribution in the state. **Direct effects** capture the contribution from agricultural and food products. **Indirect effects** capture the economic benefit from farms and agricultural businesses purchasing inputs from supporting industries within the state. **Induced effects** capture the benefits created when employees of farms, agricultural businesses, and the supporting industries spend their wages on goods and services within the state.

<sup>3</sup> Value added = labor income + indirect business taxes + other property type income.

<sup>4</sup> GRP = final demand of households + governments expenditures + capital + exports - imports - institutional sales.

<sup>5</sup> Output = intermediate inputs + value added.

The following tables document the overall summary numbers of the model, top industries affected by employment and output, and a listing of all industries that were analyzed.

In the top ten by employment, Cattle ranching and farming is the top employer in the agriculture industry with 482.6 employees. This table also shows the amount of jobs that are created by the agriculture industry in Miami County.

Description	Total Employment	Total Output
Cattle ranching and farming	482.6	39,126,027.3
Grain farming	431.5	12,984,372.7
Oilseed farming	231.4	19,279,456.3
Animal production, except cattle and poultry and eggs	81.1	2,126,699.5
All other crop farming	51.3	9,698,119.0
Support activities for agriculture and forestry	21.7	23,157.1
Greenhouse, nursery, and floriculture production	21.4	5,200,411.0
Farm machinery and equipment manufacturing	21.2	12,225,092.7
Animal (except poultry) slaughtering, rendering, and processing	19.3	6,133,527.6
Fruit and vegetable canning, pickling, and drying	18.7	9,786,635.8

The Cattle ranching and farming industry directly contributes approximately \$39 million to Miami County's economy. This table also shows how much revenue is generated in other industries by having a strong agriculture industry.

Description	Total Employment	Total Output
Cattle ranching and farming	482.6	39,126,027.3
Oilseed farming	231.4	19,279,456.3
Grain farming	431.5	12,984,372.7
Farm machinery and equipment manufacturing	21.2	12,225,092.7
Fruit and vegetable canning, pickling, and drying	18.7	9,786,635.8
All other crop farming	51.3	9,698,119.0
Animal (except poultry) slaughtering, rendering, and processing	19.3	6,133,527.6
Monetary authorities and depository credit intermediation activities	18.1	6,016,473.2
Greenhouse, nursery, and floriculture production	21.4	5,200,411.0
All other food manufacturing	12.4	4,043,090.9

Below is a summary of all agriculture data with employment levels and output level. These values can tell how many jobs are represented by each agriculture sector and the output they contributed to Miami County's economy.

Oilseed farming    234.53    19,022,449.49      Grain farming    437.33    12,811,283.11      Vegetable and melon farming    1.05    329,416.10      Fruit farming    1.05    329,416.10      Greenhouse, nursery, and floriculture production    2.171    5131,086.35      All other crop farming    52.03    9,568.837.17      Cattle ranching and farming    489.18    38.603,454.59      Dairy cattle and milk production    12.39    1,265,043.26      Poultry and egg production    0.15    66,643.20      Animal production, except cattle and poultry and eggs    82.18    2,098,294.97      Support activities for agriculture and forestry    22.65    22,220.70      Fruit and wegetable canning, pickling, and drying    19.29    9,470,919.61      Animal production annufacturing    19.29    9,470,919.61      Animal except poultry slaughtering, rendering, and processing    19.78    5,972,624.84      All other food manufacturing    12.57    4,000,051.50      Soft drink and ice manufacturing    2.0    1.25    4,342,88.98      Farm machinery and equipment manufacturing	Description	Employment	Output
Vegetable and melon farming    7.44    2.056,412.46      Fruit farming    1.05    329,416.10      Tree nut farming    1.89    247,710.20      Greenhouse, nursery, and floriculture production    21.71    5,131,086.35      All other crop farming    52.03    9,568,837.17      Cattle ranching and farming    489.18    38,603,454.59      Dairy cattle and milk production    0.15    66,643.20      Poultry and egg production    0.15    66,643.20      Animal production, except cattle and poultry and eggs    82.18    2,098,294.97      Support activities for agriculture and forestry    22.65    22,220.70      Fruit and vegetable canning, pickling, and drying    19.29    9470,919.61      Animal (except poultry) slaughtering, rendering, and processing    19.78    5,997,262.48      All other food manufacturing    12.57    4,000,051.50      Soft drink and ice manufacturing    1.59    1,295,664.31      Wineries    1.42    443,288.98      Gher industrial machinery manufacturing    5.63    2,230,333.81	Oilseed farming	234.53	19,022,449.49
Fruit farming    1.05    329,416.10      Tree nut farming    1.89    247,710.20      Greenhouse, nursery, and floriculture production    21.71    5,131,086.35      All other crop farming    52.03    9,568,837.17      Cattle ranching and farming    489.18    38,603,454.59      Dairy cattle and milk production    12.39    1,265,043.26      Poultry and egg production    0.15    66,643.20      Animal production, except cattle and poultry and eggs    82.18    2,098,294.97      Support activities for agriculture and forestry    22.65    22,220.70      Fruit and vegetable canning, pickling, and drying    19.29    9,470,919.61      Animal (except poultry) slaughtering, rendering, and processing    19.78    5,997,262.48      All other food manufacturing    12.57    4,000,051.50      Soft drink and ice manufacturing    1.59    1,295,664.31      Wineries    1.42    434,288.98      Farm machinery and equipment manufacturing    5.63    2,230,333.81	Grain farming	437.33	12,811,283.11
Tree nut farming    1.89    247,710.20      Greenhouse, nursery, and floriculture production    21.71    5,131,086.35      All other crop farming    52.03    9,568,837.17      Cattle ranching and farming    489.18    38,603,454.59      Dairy cattle and milk production    12.39    1,265,043.26      Poultry and egg production    0.15    66,643.20      Animal production, except cattle and poultry and eggs    82.18    2,098,294.97      Support activities for agriculture and forestry    22.65    22,220.70      Fruit and vegetable canning, pickling, and drying    19.29    9,470,919.61      Animal (except poultry) slaughtering, rendering, and processing    19.78    5,997,262.48      All other food manufacturing    1.59    1,295,664.31      Wineries    1.12    4,000,051.50      Soft drink and ice manufacturing    1.59    1,295,664.31      Wineries    1.14    434,288.98      Farm machinery and equipment manufacturing    2.06    11,757,639.88      Other industrial machinery manufacturing    5.63    2,230,333.81	Vegetable and melon farming	7.44	2,056,412.46
Greenhouse, nursery, and floriculture production    21.71    5,131,086.35      All other crop farming    52.03    9,588,837.17      Cattle ranching and farming    489.18    38,603,454.59      Dairy cattle and milk production    12.39    1,265,043.26      Poultry and egg production    0.15    66,643.20      Animal production, except cattle and poultry and eggs    82.18    2,098,294.97      Support activities for agriculture and forestry    22.65    22,220.70      Fruit and vegetable canning, pickling, and drying    19.29    9,470,919.61      Animal (except poultry) slaughtering, rendering, and processing    19.78    5.997,262.48      All other food manufacturing    12.57    4,000,051.50      Soft drink and ice manufacturing    1.59    1,295,664.31      Wincries    1.42    434,288.98      Farm machinery and equipment manufacturing    2.06    11,757,639.88      Other industrial machinery manufacturing    5.63    2,230,333.81	Fruit farming	1.05	329,416.10
All other crop farming    52.03    9,568,837.17      Cattle ranching and farming    489.18    38,603,454.59      Dairy cattle and milk production    12.39    1,265,043.26      Poultry and egg production    0.15    66,643.20      Animal production, except cattle and poultry and eggs    82.18    2.098,294.97      Support activities for agriculture and forestry    22.65    22,220.70      Fruit and vegetable canning, pickling, and drying    19.29    9,470,919.61      Animal (except poultry) slaughtering, rendering, and processing    19.78    5,997,262.48      All other food manufacturing    12.57    4,000,051.50      Soft drink and ice manufacturing    1.59    1,295.664.31      Wineries    1.42    434,288.98      Farm machinery and equipment manufacturing    5.63    2,230,333.81	Tree nut farming	1.89	247,710.20
Cattle ranching and farming    489.18    38,603,454.59      Dairy cattle and milk production    12.39    1,265,043.26      Poultry and egg production    0.15    66,643.20      Animal production, except cattle and poultry and eggs    82.18    2,098,294.97      Support activities for agriculture and forestry    22.65    22,220.70      Fruit and vegetable canning, pickling, and drying    19.29    9,470,919.61      Animal (except poultry) slaughtering, rendering, and processing    19.78    5,997,262.48      All other food manufacturing    12.57    4,000,051.50      Soft drink and ice manufacturing    1.59    1,295,664.31      Wineries    1.42    244,288.98      Farm machinery and equipment manufacturing    22.06    11,757,639.88      Other industrial machinery manufacturing    5.63    2,230,333.81	Greenhouse, nursery, and floriculture production	21.71	5,131,086.35
Dairy cattle and milk production    12.39    1,265,043,26      Poultry and egg production    0.15    66,643.20      Animal production, except cattle and poultry and eggs    82.18    2,098,294.97      Support activities for agriculture and forestry    22.65    22,220.70      Fruit and vegetable canning, pickling, and drying    19.29    9,470,919.61      Animal (except poultry) slaughtering, rendering, and processing    19.78    5,997,262.48      All other food manufacturing    12.57    4,000,051.50      Soft drink and ice manufacturing    1.59    1,295,664.31      Wineries    1.42    434,288.98      Other industrial machinery and equipment manufacturing    2.206    11,757,639.88      Other industrial machinery manufacturing    5.63    2,230,333.81	All other crop farming	52.03	9,568,837.17
Poultry and egg production	Cattle ranching and farming	489.18	38,603,454.59
Animal production, except cattle and poultry and eggs  82.18  2,098,294,97    Support activities for agriculture and forestry  22.65  22,220.70    Fruit and vegetable canning, pickling, and drying  19.29  9,470,919.61    Animal (except poultry) slaughtering, rendering, and processing  19.78  5,997,262.48    All other food manufacturing  12.57  4,000,051.50    Soft drink and ice manufacturing  1.42  434,288.98    Farm machinery and equipment manufacturing  22.06  11,757,639.88    Other industrial machinery manufacturing  5.63  2,230,333.81	Dairy cattle and milk production	12.39	1,265,043.26
Support activities for agriculture and forestry    22.65    22,220.70      Fruit and vegetable canning, pickling, and drying    19.29    9,470,919.61      Animal (except poultry) slaughtering, rendering, and processing    19.78    5,997,262.48      All other food manufacturing    12.57    4,000,051.50      Soft drink and ice manufacturing    1.59    11,295,664.31      Wineries    1.42    434,288.98      Farm machinery and equipment manufacturing    22.06    11,757,639.88      Other industrial machinery manufacturing    5.63    2,230,333.81	Poultry and egg production	0.15	66,643.20
Fruit and vegetable canning, pickling, and drying  19.29  9,470,919.61    Animal (except poultry) slaughtering, rendering, and processing  19.78  5,997,262.48    All other food manufacturing  12.57  4,000,051.50    Soft drink and ice manufacturing  1.59  1,295,664.31    Wineries  1.42  434,288.98    Farm machinery and equipment manufacturing  22.06  11,757,639.88    Other industrial machinery manufacturing  5.63  2,230,333.81  -	Animal production, except cattle and poultry and eggs	82.18	2,098,294.97
Animal (except poultry) slaughtering, rendering, and processing  19.78  5,997,262.48    All other food manufacturing  12.57  4,000,051.50    Soft drink and ice manufacturing  1.59  1,295,664.31    Wineries  1.42  434,288.98    Farm machinery and equipment manufacturing  22.06  11,757,639.88    Other industrial machinery manufacturing  5.63  2,230,333.81	Support activities for agriculture and forestry	22.65	22,220.70
All other food manufacturing  12.57  4,000,051.50    Soft drink and ice manufacturing  1.59  1,295,664.31    Wineries  1.42  434,288.98    Farm machinery and equipment manufacturing  22.06  11,757,639.88    Other industrial machinery manufacturing  5.63  2,230,333.81	Fruit and vegetable canning, pickling, and drying	19.29	9,470,919.61
Soft drink and ice manufacturing    1.59    1,295,664.31      Wineries    1.42    434,288.98      Farm machinery and equipment manufacturing    22.06    11,757,639.88      Other industrial machinery manufacturing    5.63    2,230,333.81 </td <td>Animal (except poultry) slaughtering, rendering, and processing</td> <td>19.78</td> <td>5,997,262.48</td>	Animal (except poultry) slaughtering, rendering, and processing	19.78	5,997,262.48
Wineries    1.42    434,288,98      Farm machinery and equipment manufacturing    22.06    11,757,639.88      Other industrial machinery manufacturing    5.63    2,230,333.81	All other food manufacturing	12.57	4,000,051.50
Farm machinery and equipment manufacturing    22.06    11,757,639.88      Other industrial machinery manufacturing    5.63    2,230,333.81	Soft drink and ice manufacturing	1.59	1,295,664.31
Other industrial machinery manufacturing    5.63    2,230,333.81 <t< td=""><td>Wineries</td><td>1.42</td><td>434,288.98</td></t<>	Wineries	1.42	434,288.98
	Farm machinery and equipment manufacturing	22.06	11,757,639.88
	Other industrial machinery manufacturing	5.63	2,230,333.81
The state of the			

All 105 counties in Kansas have Implan models and agriculture contribution summary. These values do not factor in the retail environment of food sales. Food retail is important, but in order to provide the most accurate picture of what production agricultural and processing contributes to Kansas, the retail sector was omitted.